

5. POINT DEFIANCE–TAHLEQUAH

The Point Defiance-Tahlequah route is a 1.5 nautical mile auto ferry route which connects north Tacoma with south Vashon Island with a 15 minute crossing. It carries nearly 1,400 vehicles/ drivers and over 1,025 passengers per day for a total average daily ridership of approximately 2,425. During May 1999, the month in which this route was surveyed, average daily ridership totaled 2,360.

Key trip making information and geographic travel patterns for patrons of this route are presented herein. Additional route-specific survey tabulations and results for all three survey periods, including ferry user demographic information, can be found in Appendix B.

5.1 TRIP MAKING INFORMATION

5.1.1 Weekday Trip Statistics

Weekday trip statistics presented here are grouped into three topics:

- Trip purpose and usage frequency;
- Travel modes and round-trip patterns; and
- Desired transit improvements.

The focus of these results is primarily on the PM peak survey period, contrasting the peak results with the PM non-peak period for key items such as trip purpose and wait times.

Trip Purpose

Table 5-1 summarizes the trip purpose and frequency of use during the weekday PM peak period. Responses have been aggregated into several major categories, including work/school/business commute, medical appointment/personal business/other travel and travel for social/recreational/shopping/sight-seeing purposes. Out of all trips on this route, work/school/business related trips were the most common trip purpose, similar to the 1993 survey results.

As expected during this time period, trips for work, school or business were the most frequent of all trip purposes with just over 55% of travelers riding more than 10 times during the past 7 days. Riders during the PM peak period were frequent users with over 43% of all trip purposes riding 10 or more times in the past 7 days and 19% riding 6 to 9 times during the past 7 days.

Table 5-1
Trip Purpose and Frequency of Use Distribution
Point Defiance-Tahlequah – Weekday PM Peak Period

<i>Frequency of Use / Trip Purpose</i>	<i>Work/School/ Business Related</i>	<i>Medical Appt./ Personal Business/ Other</i>	<i>Social/ Recreational/ Shopping/ Sight-seeing</i>	<i>All Trip Purposes</i>	<i>Expanded Ridership Total</i>
1st Ride in Past 7 Days*	1.9%	0.0%	22.2%	5.1%	35
2 to 5 Rides in Past 7 Days	17.2%	55.7%	37.2%	25.8%	178
6 to 9 Rides in Past 7 Days	19.8%	22.1%	13.2%	19.0%	131
10 or More Rides in Past 7 Days	55.8%	15.1%	17.1%	43.7%	301
No Answer	5.3%	7.1%	10.4%	6.4%	44
Totals	100.0%	100.0%	100.0%	100.0%	689
Overall Trip Purpose Distribution	69.5%	13.5%	17.0%	100.0%	
Expanded Ridership	479	93	117	689	

* 1st Ride in Past 7 Days includes passengers who answered: 1st ride in past year and 1st ride ever.

Unlike the weekday PM peak period, the weekday PM non-peak period riders were more evenly distributed among the three trip purpose categories as seen in Table 5-2. Trips for work/school/business trips were the most common trip purpose, but the total number of other trip purposes was fairly close to the total for work/school/business trips. Similar to the PM peak period, the most frequent riders were traveling on the route for work/school/business purposes.

Table 5-2
Trip Purpose and Frequency of Use Distribution
Point Defiance-Tahlequah – Weekday PM Non-Peak Period

<i>Frequency of Use / Trip Purpose</i>	<i>Work/School/ Business Related</i>	<i>Medical Appt./ Personal Business/ Other</i>	<i>Social/ Recreational/ Shopping/ Sight-seeing</i>	<i>All Trip Purposes</i>	<i>Expanded Ridership Total</i>
1st Ride in Past 7 Days*	6.1%	9.6%	20.3%	12.0%	72
2 to 5 Rides in Past 7 Days	20.8%	56.2%	51.2%	41.5%	250
6 to 9 Rides in Past 7 Days	10.6%	17.8%	12.0%	13.2%	80
10 or More Rides in Past 7 Days	49.0%	9.3%	6.0%	22.8%	137
No Answer	13.5%	7.1%	10.5%	10.6%	64
Totals	100.0%	100.0%	100.0%	100.0%	604
Overall Trip Purpose Distribution	36.8%	29.2%	34.1%	100.0%	
Expanded Ridership	222	176	206	604	

* 1st Ride in Past 7 Days includes passengers who answered: 1st ride in past year and 1st ride ever.

Trip origin and destination types by direction are summarized in Table 5-3 for the weekday PM peak period. During the this, the majority of riders were traveling from work/school to home for both eastbound and westbound directions. During the PM peak period, riders were primarily traveling westbound to Vashon Island from work/school to home. Westbound or to-island trips comprise 65% of the work/school-to-home trips. Overall travel for all trip purposes has a similar directional split, with approximately two-thirds of trips headed westbound/to-island.

Table 5-3
Trip Origin and Destination Types by Direction
Point Defiance-Tahlequah – Weekday PM Peak Period

<i>Origin & Destination Types</i>		<i>Destination Shares Across All Origins:</i>			<i>Expanded Ridership Total</i>
<i>Origin Place</i>	<i>Destination Place</i>	<i>Eastbound Trips</i>	<i>Westbound Trips</i>	<i>Both Directions</i>	
Home	Home	1.7%	0.0%	0.6%	4
	Work/School	10.3%	1.6%	4.7%	32
	Other	20.6%	4.8%	10.4%	72
Work/School	Home	34.7%	64.9%	54.2%	374
	Work/School	0.0%	0.0%	0.0%	0
	Other	5.1%	2.2%	3.2%	22
Other	Home	6.5%	22.1%	16.6%	114
	Work/School	1.7%	0.0%	0.6%	4
	Other	19.4%	4.3%	9.6%	66
Totals		100.0%	100.0%	100.0%	689
Travel Direction Distribution		35.4%	64.6%	100.0%	
Expanded Ridership		244	445	689	

Travel Modes and Round-Trip Patterns

This section presents the survey responses related to trip patterns, mode of access and egress, and boarding method. In addition, the survey responses to questions regarding wait time, parking, and desire transit improvements are summarized in this section.

Table 5-4 summarizes the round trip patterns of riders during the weekday PM peak period. Nearly all riders that answered the question responded that they used the ferry system for both legs of their round-trip. Furthermore, the majority of riders completed their trip during the same day the trip was initiated on the same ferry route.

Table 5-4
Round-Trip Patterns and Methods
Point Defiance-Tahlequah – Weekday PM Peak Period

<i>Round-Trip Segment & Method / Time</i>	<i>Today</i>	<i>Some Other Day</i>	<i>No Answer</i>	<i>Expanded Ridership</i>
Declared Initial Trip (Reported on 2nd Half of Round-Trip)				74.6%
Same Ferry Route	77.5%	0.5%	10.7%	456
Not Using Ferry System	0.5%	0.0%	0.0%	2
Different Ferry Route	7.5%	0.0%	0.0%	39
No Answer	2.4%	0.0%	1.0%	17
<i>Total Declared Initial Trip</i>	<i>87.8%</i>	<i>0.5%</i>	<i>11.7%</i>	<i>514</i>
Expected Return Trip (Reported on 1st Half of Round-Trip)				23.5%
Same Ferry Route	67.5%	14.3%	4.2%	139
Not Using Ferry System	0.0%	0.0%	0.0%	0
Different Ferry Route	4.5%	3.5%	0.0%	13
No Answer	4.1%	2.0%	0.0%	10
<i>Total Expected Return Trip</i>	<i>76.1%</i>	<i>19.7%</i>	<i>4.2%</i>	<i>162</i>
No Answer (Did Not Report Round-Trip Status)				1.9%
<i>No Answer</i>			<i>100.0%</i>	<i>13</i>
Expanded Ridership Total	575	34	80	689

Access and egress mode shares and boarding mode distributions from the 1993 survey were modified to approximate 1999 Travel Survey methods and data collection procedures for comparison purposes. However, the 1993 results are not directly comparable to the expanded survey results based upon the data collected in 1999. Please see Section 3.5.2 in Chapter 3 for a detailed explanation of these procedures. These modified percentages can nonetheless be used for generalized comparisons, as presented in the following discussion.

“In 1999, over 28% of walk-on riders accessed the ferry terminal by bus or shuttle. This appears to represent a significant increase in the use of transit to access the terminal since 1993, despite no significant changes in transit service.”

Table 5-5 identifies the access and egress mode as well as the boarding method during the weekday PM peak period. Similar to 1993, the most common mode of access and egress was by vehicle, and the most common boarding method was riders boarding in a vehicle. In 1999, over 28% of walk-on riders accessed the ferry terminal by bus or shuttle. This appears to represent a significant increase in the use of transit to access the terminal since 1993, despite no significant changes in transit service.

However, this could also be a result of a revised survey questionnaire which elicited more accurate answers from survey respondents. The mode of egress for walk-on riders in 1999 remained similar to 1993, with a slight increase in the percentage of those walking/bicycling and those using a bus or shuttle.

Table 5-5
Access Mode to Ferry – Boarding Method – Egress Mode from Ferry
Point Defiance-Tahlequah – Weekday PM Peak Period

<i>Access Mode to Ferry Terminal</i>	<i>Percent Distrib.</i>	<i>Boarding Method</i>	<i>Percent Distrib.</i>	<i>Mode Shares</i>	<i>Egress Mode from Ferry Terminal</i>	<i>Percent Distrib.</i>
Pedestrian/Bicycle	4.5%	Walked-On		16.0%	Pedestrian/Bicycle	26.9%
By Vehicle*	66.8%	Pedestrian	97.9%		By Vehicle*	66.8%
By Bus or Shuttle	28.7%	Pedestrian w/ Bicycle	2.1%		By Bus or Shuttle	6.4%
Total	100.0%	Total	100.0%		Total	100.0%
In-Vehicle	100.0%	In-Vehicle		84.0%	In-Vehicle	100.0%
		Vehicle Drivers*	81.3%			
		Vehicle Passengers	18.7%			
		Total	100.0%			
		Total		100.0%		
		Expanded Ridership Total		689		

The waiting time by boarding method is summarized in Table 5-6. Most riders (walk board and vehicle board) waited less than 30 minutes during the PM peak period. The bulk of those boarding as a pedestrian waited less than 30 minutes while the majority of those in vehicles waited less than 60 minutes.

Table 5-6
Wait Time Distribution by Boarding Method
Point Defiance-Tahlequah – Weekday PM Peak Period

<i>Wait Time Category / Boarding Method</i>	<i>Walk Board (Pedestrian & Bicycle)</i>	<i>Vehicle Board (Driver & Passenger)</i>	<i>Expanded Ridership Total</i>
Zero to 10 Minutes	53.7%	27.3%	217
11 to 30 Minutes	37.8%	43.5%	294
31 to 60 Minutes	4.3%	23.2%	139
61 to 90 Minutes	0.0%	3.0%	17
More Than 90 Minutes	2.1%	0.0%	2
No Answer	2.1%	3.0%	20
Totals	100.0%	100.0%	
Expanded Ridership	110	579	689

Wait time distribution by boarding method for the weekday PM non-peak period is shown in Table 5-7. During this period, the wait time decreased slightly in comparison to the weekday PM peak period. During the non-peak period, virtually no riders waited longer than 60 minutes. In addition, a larger amount of riders waited zero to 10 minutes than in the PM peak period. Specific to boarding mode, a greater percentage of riders boarding in a vehicle (44%) waited less than 10 minutes in comparison the PM peak period (27%). This trend also held true for walk-on boardings with just over 53% waiting 10 minutes or less in the peak period and approximately 65% waiting 10 minutes or less in the non-peak period.

Table 5-7
Wait Time Distribution by Boarding Method
Point Defiance-Tahlequah – Weekday PM Non-Peak Period

<i>Wait Time Category / Boarding Method</i>	<i>Walk Board (Pedestrian & Bicycle)</i>	<i>Vehicle Board (Driver & Passenger)</i>	<i>Expanded Ridership Total</i>
Zero to 10 Minutes	65.2%	44.3%	278
11 to 30 Minutes	29.0%	37.7%	223
31 to 60 Minutes	5.8%	15.5%	89
61 to 90 Minutes	0.0%	0.5%	3
More Than 90 Minutes	0.0%	0.0%	0
No Answer	0.0%	1.9%	11
Totals	100.0%	100.0%	
Expanded Ridership	47	556	604

Table 5-8 lists the type of parking used by ferry riders who boarded as pedestrians during the weekday PM peak period. It appears that almost 30% used some sort of parking on both sides, thus they probably had a car available on each side of this route. Some combination of free parking either on one side or both sides comprised the bulk of the responses with the greatest percentage of riders receiving free parking on one side. Paying for parking on both sides was the lowest percentage of all the parking options with approximately 5% of riders.

Table 5-8
Walk-Board Passenger Parking Statistics
Point Defiance-Tahlequah – Weekday PM Peak Period

<i>Reported Parking Characteristics</i>	<i>Expanded Ridership</i>	<i>Percent of Total</i>	<i>Average Total Parking Paid*</i>
Used Paid Parking on Both Sides	5	4.8%	N/A
Used Paid Parking One Side & Free Parking Other Side	12	10.9%	N/A
Used Free Parking on Both Sides	15	14.1%	\$0.00
Paid Parking One Side & Did Not Park Other Side or Insufficient Information	12	10.7%	\$0.71
Free Parking One Side & Did Not Park Other Side or Insufficient Information	49	44.7%	\$0.00
Did Not Park on Either Side or Insufficient Parking Information	16	14.9%	N/A
Totals	110	100.0%	

*Only surveys with a reported dollar amount paid for parking were included in the average cost calculation (those with free parking were excluded).

Desired Transit Improvements

The survey respondents were asked for their input on improvements to transit service during the weekday PM peak period in terms of both bus and ferry and the results are presented in Table 5-9. Providing service closer to users' origin or destination was the most popular response with just over 25%. Transit service at both ends of the ferry route was the next most common answer with 19%. The most frequent write-in comment was the need for more park and ride information.

Table 5-9
Transit Improvements Desired
Point Defiance-Tahlequah – Weekday PM Peak Period

<i>Transit Improvement</i>	<i>Distribution</i>	<i>Expanded Ridership</i>
Service within 2 Blocks of Origin or Destination	25.7%	177
Service at Both Ends of Ferry Route	19.0%	131
Seamless Connection between Ferry & Bus	5.2%	36
Employer Paid or Subsidized Bus Pass	5.4%	37
More Park & Ride Lots/Spaces Available	7.4%	51
None of the Above/No Answer	28.5%	196
<i>Frequent Write-In Comments</i>		
More Passenger Only Service	0.5%	3
Lower Park & Ride Parking Fees/Free	3.4%	24
More Park & Ride Information	3.8%	26
"Other" Comments	1.1%	7
Totals	100.0%	689

Table 5-10 summarizes the desired transit improvements for the weekday PM non-peak period. Similar to the responses for the weekday PM peak period, the most popular desire was for closer transit service at both ends of the ferry routes. The most frequent write-in comment was for more park and ride information, similar to the PM peak period.

Table 5-10
Transit Improvements Desired
Point Defiance-Tahlequah – Weekday PM Non-Peak Period

<i>Transit Improvement</i>	<i>Distribution</i>	<i>Expanded Ridership</i>
Service within 2 Blocks of Origin or Destination	18.3%	111
Service at Both Ends of Ferry Route	20.8%	126
Seamless Connection between Ferry & Bus	7.2%	44
Employer Paid or Subsidized Bus Pass	4.7%	28
More Park & Ride Lots/Spaces Available	12.9%	78
None of the Above/No Answer	28.7%	173
<i>Frequent Write-In Comments</i>		
More Passenger Only Service	1.4%	9
Lower Park & Ride Parking Fees/Free	1.8%	11
More Park & Ride Information	3.1%	19
"Other" Comments	0.9%	6
Totals	100.0%	604

5.1.2 Sunday Trip Statistics

Sunday trip statistics presented here are grouped into two categories:

- Trip purpose and usage frequency; and
- Travel modes and round-trip patterns.

Trip Purpose

Table 5-11 summarizes the trip purpose and frequency of use during Sunday for survey respondents. Responses have been aggregated into several major categories, including work/school/business commute, medical appointment/personal business/other travel and travel for social/recreational/shopping/sight-seeing purposes. As expected, the trip frequency of Sunday respondents was not as great as the weekday riders. In fact, a significant percentage of Sunday riders indicated they used the ferry 2 to 5 times during the past 7 days, while the largest percentage of the weekday PM peak users used the ferry 10 or more times in the past 7 days. Not surprisingly, the weekend respondents were mainly using the ferry for social/recreational/shopping purposes.

Table 5-11
Trip Purpose and Frequency of Use Distribution
Point Defiance-Tahlequah – Sunday Survey Period

<i>Frequency of Use / Trip Purpose</i>	<i>Work/School/ Business Related</i>	<i>Medical Appt./ Personal Business/ Other</i>	<i>Social/ Recreational/ Shopping/ Sight-seeing</i>	<i>All Trip Purposes</i>	<i>Usable Responses</i>
1st Ride in Past 7 Days*	0.0%	17.8%	20.5%	18.2%	61
2 to 5 Rides in Past 7 Days	13.8%	35.6%	39.3%	36.3%	122
6 to 9 Rides in Past 7 Days	13.8%	8.2%	13.7%	12.5%	42
10 or More Rides in Past 7 Days	58.6%	28.8%	20.9%	25.9%	87
No Answer	13.8%	9.6%	5.6%	7.1%	24
Totals	100.0%	100.0%	100.0%	100.0%	336
Overall Trip Purpose Distribution	8.6%	21.7%	69.6%	100.0%	
Usable Responses	29	73	234	336	

* 1st Ride in Past 7 Days includes passengers who answered: 1st ride in past year and 1st ride ever.

Travel Modes and Round-Trip Patterns

Table 5-12 indicates that over half the respondents used the same ferry route to complete their round trip in the same day similar to the weekday riders. However, more Sunday respondents (approximately 20%) answered that they would complete their trip “some other day” than weekday riders would (about 11%).

The waiting time by boarding method is summarized in Table 5-13. Nearly all respondents (walk board and vehicle board) indicated that they waited less than 60 minutes. Specific to boarding method, over half of those in vehicles waited less than 30 minutes, while over 63% of pedestrians waited less than 10 minutes. More weekday PM peak period walk-on passengers waited 11 to 30 minutes (38%) than Sunday respondents (15%).

Table 5-12
Round-Trip Patterns and Methods
Point Defiance-Tahlequah – Sunday Survey Period

<i>Round-Trip Segment & Method / Time</i>	<i>Today</i>	<i>Some Other Day</i>	<i>No Answer</i>	<i>Usable Responses</i>
Declared Initial Trip (Reported on 2nd Half of Round-Trip)				61.3%
Same Ferry Route	57.3%	18.9%	8.7%	175
Not Using Ferry System	0.0%	0.5%	0.0%	1
Different Ferry Route	5.8%	5.8%	0.5%	25
No Answer	1.5%	1.0%	0.0%	5
<i>Total Declared Initial Trip</i>	<i>64.6%</i>	<i>26.2%</i>	<i>9.2%</i>	<i>206</i>
Expected Return Trip (Reported on 1st Half of Round-Trip)				36.9%
Same Ferry Route	64.5%	7.3%	9.7%	101
Not Using Ferry System	0.8%	0.0%	0.0%	1
Different Ferry Route	10.5%	0.0%	0.0%	13
No Answer	3.2%	3.2%	0.8%	9
<i>Total Expected Return Trip</i>	<i>79.0%</i>	<i>10.5%</i>	<i>10.5%</i>	<i>124</i>
No Answer (Did Not Report Round-Trip Status)				1.8%
<i>No Answer</i>			<i>100.0%</i>	<i>6</i>
Usable Responses	231	67	38	336

Table 5-13
Wait Time Distribution by Boarding Method
Point Defiance-Tahlequah – Sunday Survey Period

<i>Wait Time Distribution / Boarding Method</i>	<i>Walk Board (Pedestrian & Bicycle)</i>	<i>Vehicle Board (Driver & Passenger)</i>	<i>Usable Responses</i>
Zero to 10 Minutes	63.6%	37.3%	134
11 to 30 Minutes	15.2%	50.8%	159
31 to 60 Minutes	15.2%	8.9%	32
61 to 90 Minutes	0.0%	0.7%	2
More Than 90 Minutes	0.0%	0.0%	0
No Answer	6.1%	2.3%	9
Totals	100.0%	100.0%	
Usable Responses	33	303	336

5.2 GEOGRAPHIC TRAVEL PATTERNS

This section provides tables and map figures which present the locations for ferry user trip origins and destinations. Of key interest for updating the WSF travel demand forecasting model are the PM peak period origin-destination (O-D) trip tables by travel direction, presented as expanded PM peak ridership volumes and distributions for all modes, as well as for walk-on and in-vehicle boardings. Similar O-D trip tables presenting unexpanded Sunday survey period distributions are also provided. Complementing the PM peak and Sunday trip tables are two sets of map figures. The first set shows the geographic flows of origins and destinations, including route district percentage distributions, for all trips by direction. The second set of maps illustrates the directional densities of trip origins and destinations, using different pinpoint symbols to delineate walk-on and in-vehicle boarding methods.

5.2.1 Weekday PM Peak Period Trip Patterns

Table 5-14 and Figure 5-1 present westbound origin and destination information by district for all boarding modes during the weekday PM peak period. South Tacoma was the most frequent origin district for westbound travel during the weekday PM peak period with 22% of the 1999 total. In 1993, the most popular origin was the Tacoma CBD. The next most frequently occurring origins were North Tacoma and Tacoma CBD districts each with about 14% of the total. Exactly the same as 1993, 75% of the trips were headed for the South Vashon district and 25% for the North Vashon area.

As seen in Table 5-15 and Figure 5-2, the percentages for origin for eastbound travel did vary from 1993 to 1999 during for the weekday PM peak period for all boarding modes. In 1993, 38% of the trips originated from the South Vashon area and 62% from the North Vashon area. In 1999, the percentage of trips that originated from the South Vashon area increased to 70% and those from the North Vashon area decreased to 28%. The most popular destination of eastbound travelers in 1999 was the South Tacoma area (32%) while in 1993 the most common destination was the Tacoma CBD (26%).

Table 5-16 and Table 5-17 summarize origin and destination shares specific to boarding mode. The most common origins westbound for those walking on the ferry during the weekday PM peak period were the North Tacoma and Tacoma CBD districts (each with just over a 20% share). Regarding in-vehicle boardings, the most popular origin district was South Tacoma with close to 24% of the total for westbound travel. This information can be seen graphically in Figure 5-3. Eastbound PM peak period trip origins and destinations by boarding mode can be seen in Figure 5-4. The South Tacoma district captured over half (56%) of the walk-on riders headed eastbound (see Table 5-18). In addition, the South Tacoma district was the most frequent destination for in-vehicle boardings eastbound during the weekday PM peak period, as seen in Table 5-19.

Table 5-14
Point Defiance-Tahlequah O-D Trip Table
Weekday PM Peak Period – Westbound – All Boarding Modes

	DESTINATION			Origin Totals	Origin Shares
		South Vashon Island 101	North Vashon Island 102		
ORIGIN					
North Tacoma	103	50	14	65	14.7%
Tacoma CBD	104	44	19	63	14.4%
Port of Tacoma	105	7	5	12	2.8%
South Tacoma	106	82	17	98	22.4%
University Place/Fircrest	107	15	15	30	6.8%
Lakewood	108	15	13	28	6.3%
Fife/Puyallup/Sumner	109	23	10	34	7.7%
South Central Pierce County	110	10	2	13	2.9%
Southeast Pierce County	111	2		2	0.5%
West Pierce County	112	10		10	2.2%
Kent-Auburn/Federal Way	113	31	22	53	12.0%
Other South King County	114	5		5	1.1%
Thurston County	115	12	10	22	5.0%
All Other Places	116	6		6	1.3%
Destination Totals		311	128	439	100.0%
Destination Shares		70.8%	29.2%	100.0%	

Figure 5-1
Point Defiance - Tahlequah Westbound PM Peak Trips
All Boarding Modes

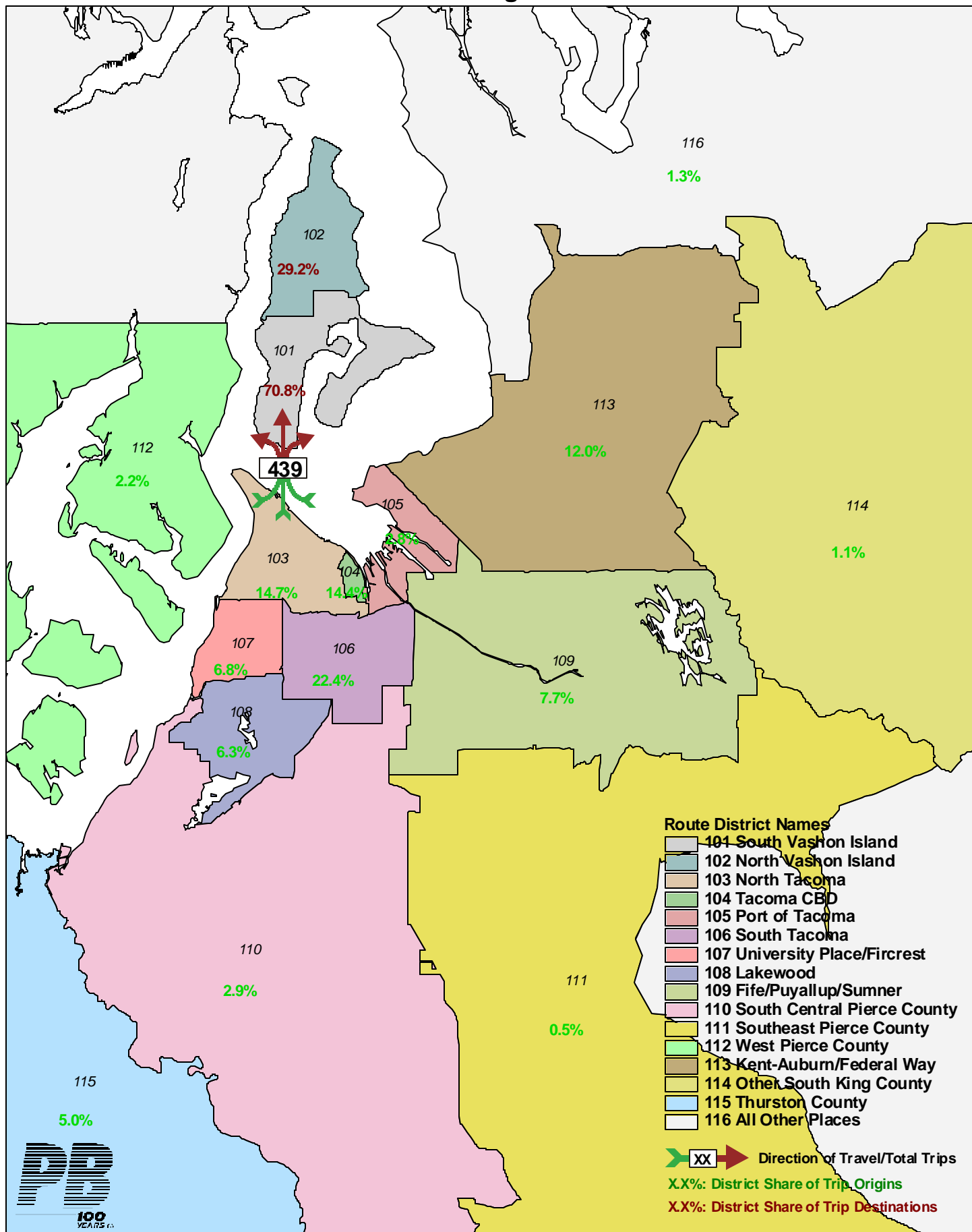


Table 5-15
Point Defiance-Tahlequah O-D Trip Table
Weekday PM Peak Period – Eastbound – All Boarding Modes

ORIGIN	DESTINATION													Origin Totals	Origin Shares
		North Tacoma 103	South Tacoma 106	University Place/Fircrest 107	Lakewood 108	Fife/Puyallup/Sumner 109	South Central Pierce County 110	Southeast Pierce County 111	West Pierce County 112	Kent/Auburn/Federal Way 113	Other South King County 114	Thurston County 115	All Other Places 116		
South Vashon Island	101	15	57	13		8	4	4	8	18	8	8	28	171	70.2%
North Vashon Island	102	14	16	4	8	8				7	3		8	68	28.1%
All Other Places	116		4											4	1.7%
Destination Totals		29	77	17	8	17	4	4	8	25	11	8	36	244	100.0%
Destination Shares		11.8%	31.6%	6.8%	3.4%	6.8%	1.7%	1.7%	3.4%	10.1%	4.5%	3.4%	14.7%	100.0%	

Figure 5-2
Point Defiance - Tahlequah Eastbound PM Peak Trips
All Boarding Modes

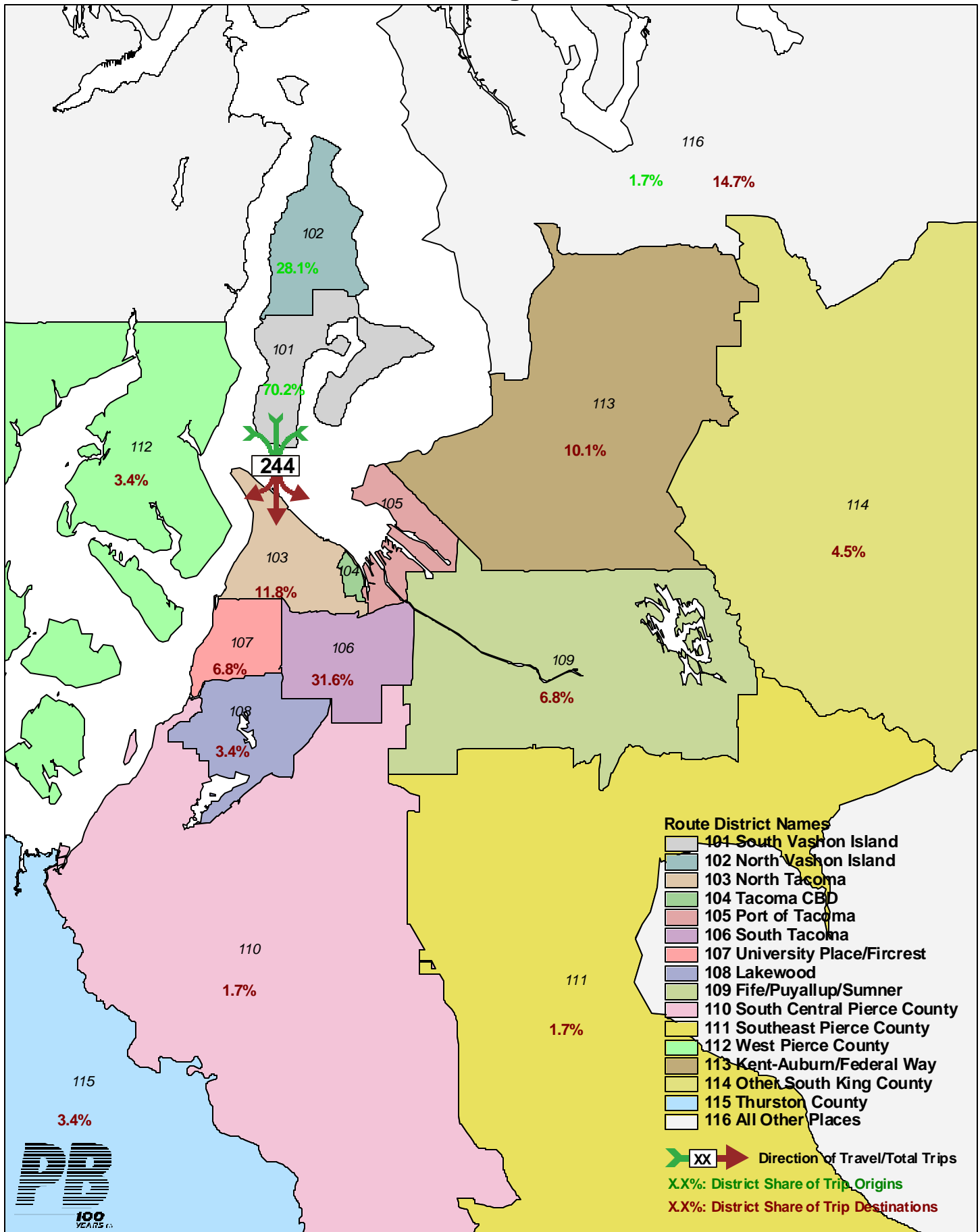


Table 5-16
Point Defiance-Tahlequah O-D Trip Table
Weekday PM Peak Period – Westbound – Walk-On Boardings

	DESTINATION			Origin Totals	Origin Shares
		South Vashon Island 101	North Vashon Island 102		
ORIGIN					
North Tacoma	103	7	7	14	20.7%
Tacoma CBD	104	7	7	14	20.7%
Port of Tacoma	105	2		2	3.4%
South Tacoma	106		9	9	13.8%
University Place/Fircrest	107	2	2	5	6.9%
Lakewood	108		2	2	3.4%
Fife/Puyallup/Sumner	109	2	2	5	6.9%
South Central Pierce County	110	5		5	6.9%
Southeast Pierce County	111	2		2	3.4%
West Pierce County	112	2		2	3.4%
Kent-Auburn/Federal Way	113	5	2	7	10.3%
Destination Totals		35	33	68	100.0%
Destination Shares		51.7%	48.3%	100.0%	

Table 5-17
Point Defiance-Tahlequah O-D Trip Table
Weekday PM Peak Period – Westbound – In-Vehicle Boardings

	DESTINATION			Origin Totals	Origin Shares
		South Vashon Island	North Vashon Island		
ORIGIN		101	102		
North Tacoma	103	43	7	50	13.6%
Tacoma CBD	104	37	12	49	13.2%
Port of Tacoma	105	5	5	10	2.6%
South Tacoma	106	82	7	89	23.9%
University Place/Fircrest	107	12	13	25	6.8%
Lakewood	108	15	11	25	6.8%
Fife/Puyallup/Sumner	109	21	8	29	7.8%
South Central Pierce County	110	6	2	8	2.2%
West Pierce County	112	7		7	2.0%
Kent-Auburn/Federal Way	113	26	20	46	12.3%
Other South King County	114	5		5	1.3%
Thurston County	115	12	10	22	5.9%
All Other Places	116	6		6	1.5%
Destination Totals		276	95	371	100.0%
Destination Shares		74.3%	25.7%	100.0%	

Figure 5-3
Point Defiance - Tahlequah Westbound PM Peak Period
Trip Origins & Destinations by Boarding Mode

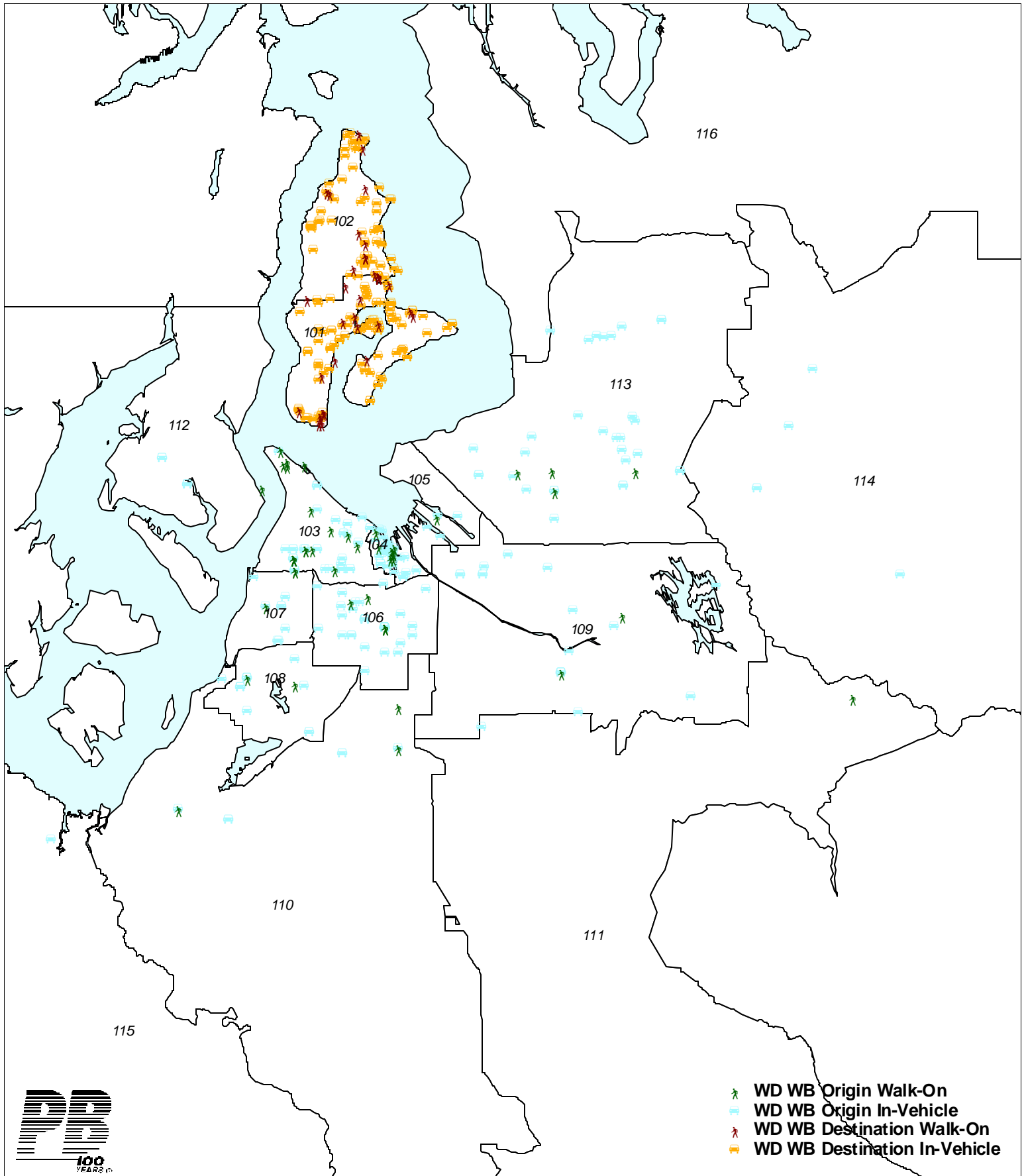


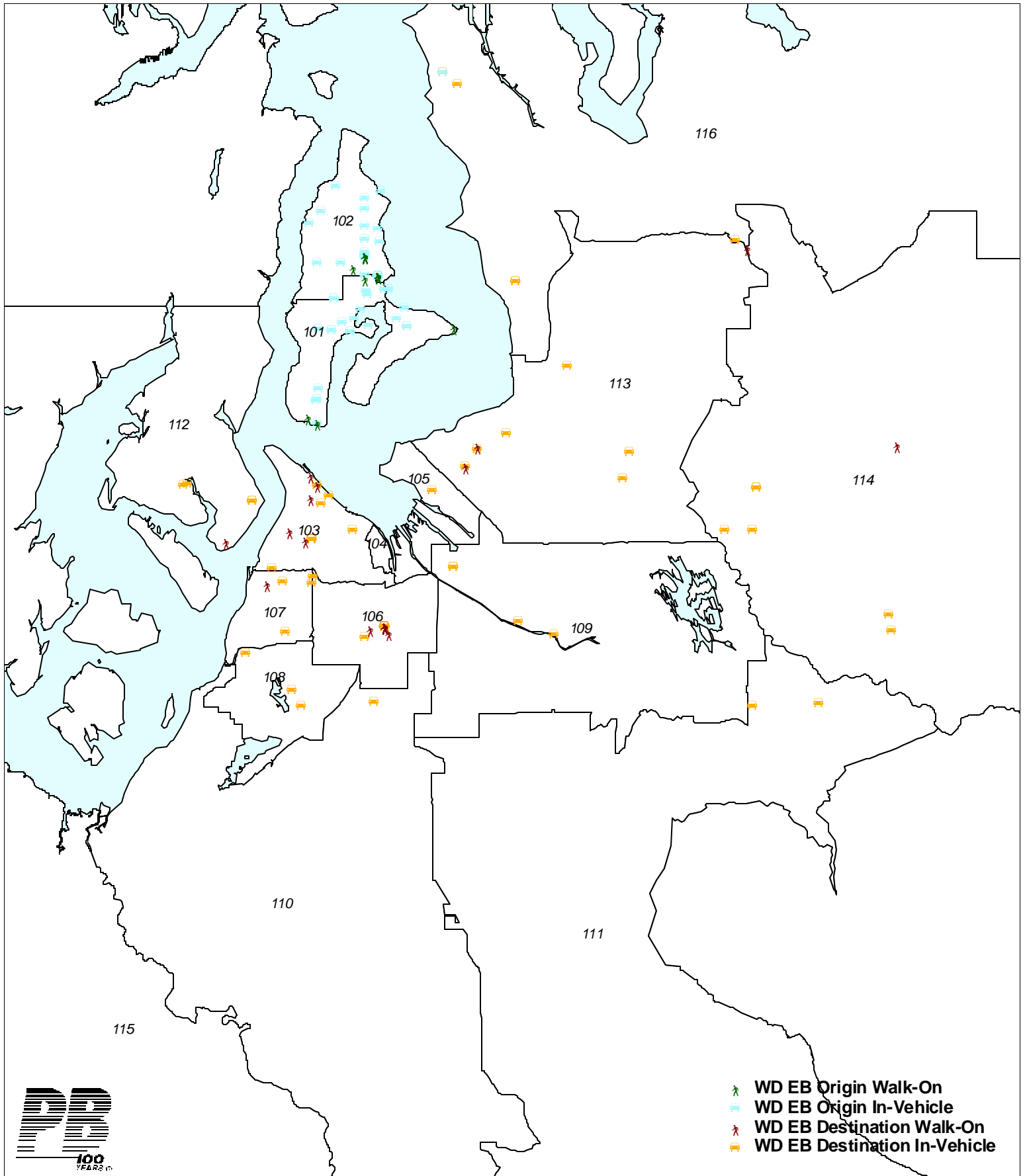
Table 5-18
Point Defiance-Tahlequah O-D Trip Table
Weekday PM Peak Period – Eastbound – Walk-On Boardings

ORIGIN	DESTINATION					Origin Totals	Origin Shares
		North Tacoma	South Tacoma	Kent-Auburn/Federal Way	Other South King County		
South Vashon Island	101	3	16	5		24	56.3%
North Vashon Island	102	5	8	3	3	18	43.8%
Destination Totals		8	24	8	3	42	100.0%
Destination Shares		18.8%	56.3%	18.8%	6.3%	100.0%	

Table 5-19
Point Defiance-Tahlequah O-D Trip Table
Weekday PM Peak Period – Eastbound – In-Vehicle Boardings

ORIGIN	DESTINATION													Origin Totals	Origin Shares
		North Tacoma	South Tacoma	University Place/Fircrest	Lakewood	Fife/Puyallup/Sumner	South Central Pierce County	Southeast Pierce County	West Pierce County	Kent-Auburn/Federal Way	Other South King County	Thurston County	All Other Places		
South Vashon Island	101	13	41	13		8	4	4	8	13	8	8	28	148	73.1%
North Vashon Island	102	8	8	4	8	8				4			8	50	24.8%
All Other Places	116		4											4	2.1%
Destination Totals		21	53	17	8	17	4	4	8	17	8	8	36	202	100.0%
Destination Shares		10.3%	26.4%	8.3%	4.1%	8.3%	2.1%	2.1%	4.1%	8.3%	4.1%	4.1%	17.8%	100.0%	

Figure 5-4
Point Defiance - Tahlequah Eastbound PM Peak Period
Trip Origins & Destinations by Boarding Mode



5.2.2 Sunday Survey Period Trip Patterns

Table 5-20 and Figure 5-5 summarize the westbound origins and destinations by district or all boarding modes during Sunday westbound travel. In 1993, the most popular origin district was “All Other Places” indicating broadly dispersed origin locations. This dispersion persists in 1999, though more trips are originating from the Tacoma area than in 1993. The distribution of Vashon destinations has also changed since 1993. Back then, the split between the South Vashon and North Vashon districts was nearly evenly divided between the two regions. By 1999, Sunday travelers were much more likely to be headed to a South Vashon destination (79%), with just 21% headed for the North Vashon district.

The origins and destinations for Sunday travel eastbound can be seen in Table 5-21 and graphically in Figure 5-6. Some differences are observable between 1993 and 1999. In 1993, 71% of eastbound trips originated from South Vashon whereas in 1999, the share had grown to 76%. The most frequent destination was the North Tacoma district in 1993, capturing 39% of the total trips, while the South Tacoma district was the most popular destination in 1999 with close to 24% of the total trips.

Figure 5-7 presents the trip origins and destinations by boarding mode for westbound Sunday travel while Figure 5-8 includes the same information except for eastbound travel. As seen in the maps, the westbound destinations were more concentrated around Tacoma while the eastbound destinations were more dispersed around the southern Puget Sound region.

Table 5-20
Point Defiance-Tahlequah O-D Trip Table
Sunday Survey Period – Westbound – All Boarding Modes

ORIGIN	DESTINATION	South Vashon Island		Origin Shares
		101	102	
North Tacoma	103	19.4%	2.3%	21.7%
Tacoma CBD	104	1.1%	0.6%	1.7%
Port of Tacoma	105	1.7%	0.6%	2.3%
South Tacoma	106	12.0%	7.4%	19.4%
University Place/Fircrest	107	1.1%	1.1%	2.3%
Lakewood	108		1.1%	1.1%
Fife/Puyallup/Sumner	109	1.7%	0.6%	2.3%
South Central Pierce County	110	2.9%	1.1%	4.0%
Southeast Pierce County	111	1.7%		1.7%
West Pierce County	112	2.9%	0.6%	3.4%
Kent-Auburn/Federal Way	113	7.4%	8.0%	15.4%
Other South King County	114	1.7%		1.7%
Thurston County	115	5.7%	1.7%	7.4%
All Other Places	116	11.4%	4.0%	15.4%
Destination Shares		70.9%	29.1%	100.0%

Figure 5-5
Point Defiance - Tahlequah Westbound Sunday Survey Period Trips
All Boarding Modes

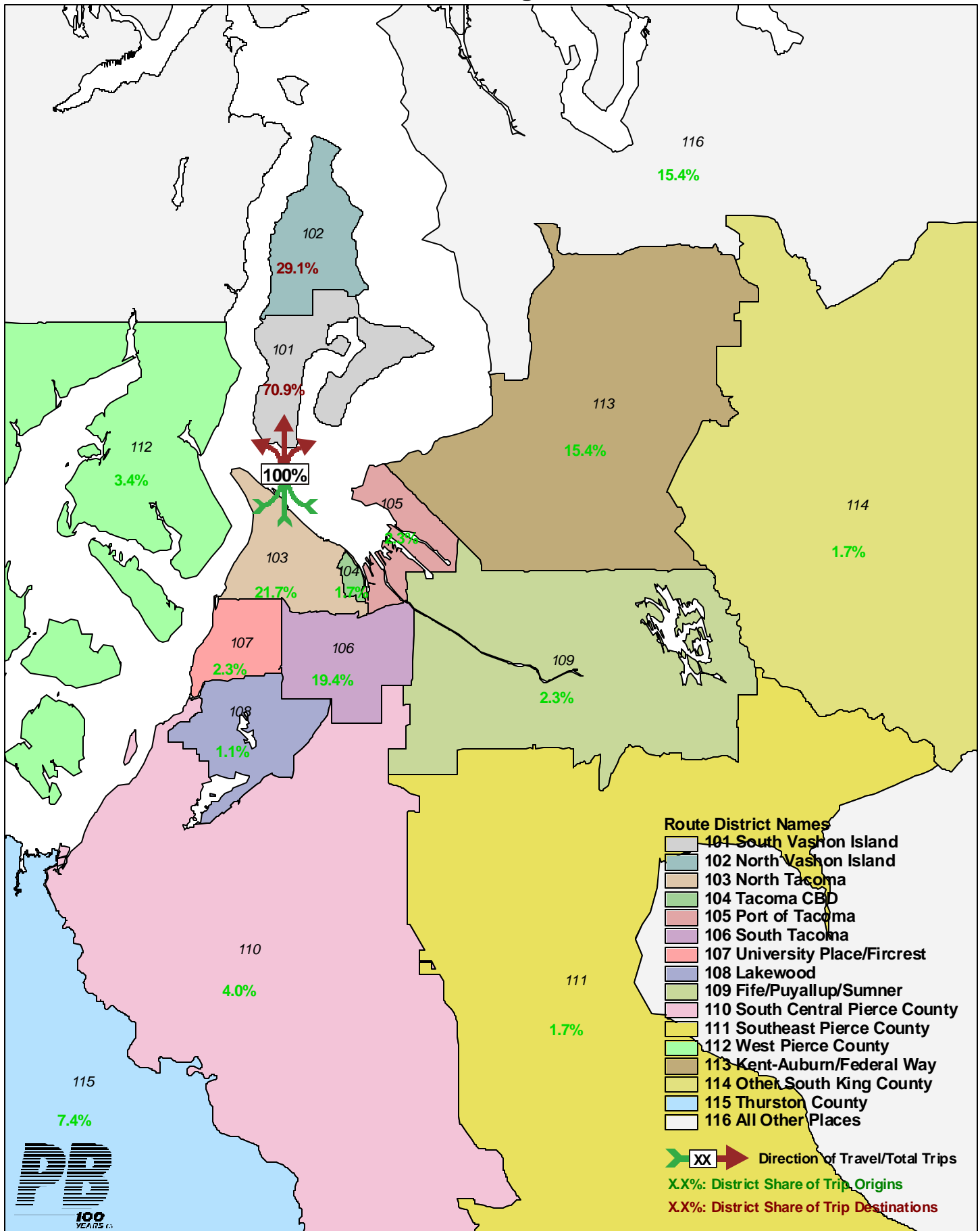


Table 5-21
Point Defiance-Tahlequah O-D Trip Table
Sunday Survey Period – Eastbound – All Boarding Modes

ORIGIN	DESTINATION														Origin Shares
		North Tacoma 103	Tacoma CBD 104	South Tacoma 106	University Place/Fircrest 107	Lakewood 108	Fife/Puyallup/Sumner 109	South Central Pierce County 110	Southeast Pierce County 111	West Pierce County 112	Kent-Auburn/Federal Way 113	Other South King County 114	Thurston County 115	All Other Places 116	
South Vashon Island	101	15.5%	2.1%	19.7%	0.7%	2.8%	2.1%	0.7%	1.4%	7.7%	7.7%	0.7%	4.9%	9.9%	76.1%
North Vashon Island	102	2.1%	1.4%	4.2%	0.7%		1.4%			0.7%	4.9%	0.7%		4.9%	21.1%
All Other Places	116	0.7%						1.4%						0.7%	2.8%
Destination Shares		18.3%	3.5%	23.9%	1.4%	2.8%	3.5%	2.1%	1.4%	8.5%	12.7%	1.4%	4.9%	15.5%	100.0%

Figure 5-6
Point Defiance - Tahlequah Eastbound Sunday Survey Period Trips
All Boarding Modes

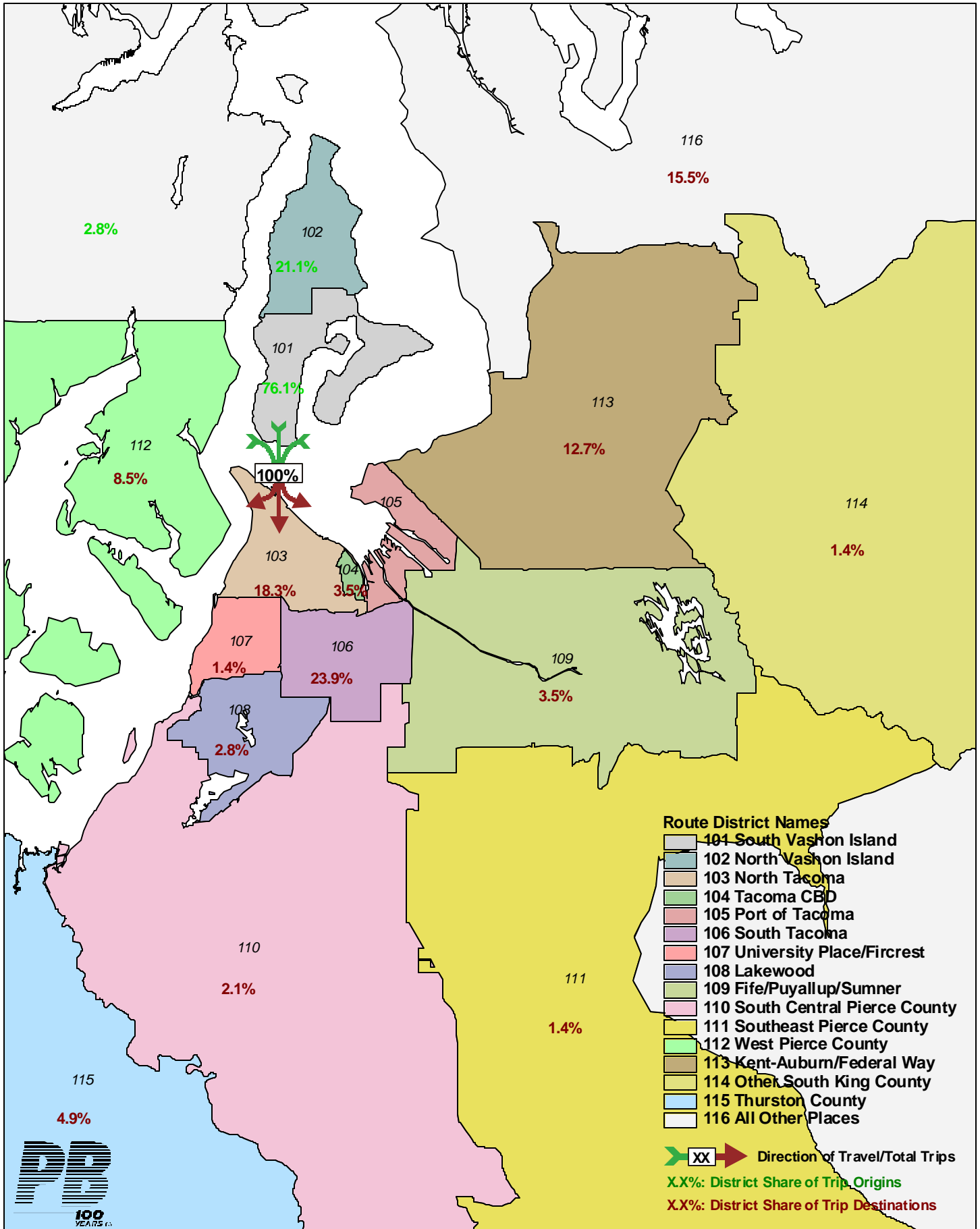


Figure 5-7
Point Defiance - Tahlequah Westbound Sunday Survey Period
Trip Origins & Destinations by Boarding Mode

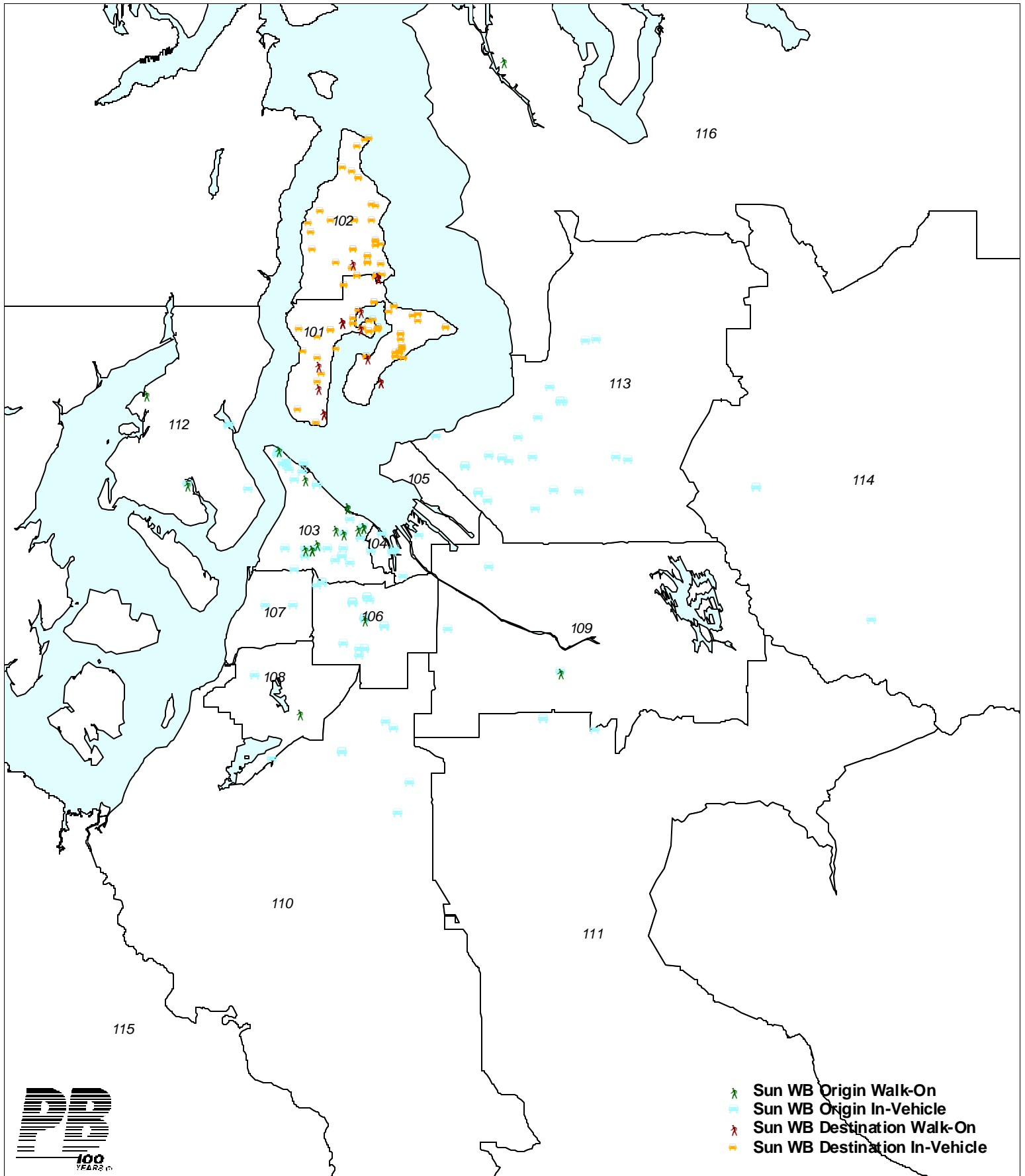


Figure 5-8
Point Defiance - Tahlequah Eastbound Sunday Survey Period
Trip Origins & Destinations by Boarding Mode

